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LETTER TO THE EDITOR

Cluster-formation in the Rosette molecular cloud at the junctions of filaments (Corrigendum)

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Key words. ISM: clouds – ISM: structure – evolution – HII regions – errata, addenda

The paper by Schneider et al. (2012) contains an error in Sect. 2.2 and in Fig. 6. The bottom y -axis label of Fig. 6 must read “PDF(η)” instead of “ \log_{10} PDF(η)”. The corrected version of the figure is shown in Fig. 1 here. In Sect. 2.2 of Schneider et al. (2012), the slope fitted to the high-density tail of the composite PDF, Fig. 6 (here Fig. 1), in Rosette was wrongly quoted to correspond to a radial volumetric density profile $n \propto r^{-0.65}$. The value of the slope -0.65 actually corresponds to the radial column density profile, $N \propto r^{-0.65}$. Since $n \propto N/r$, this translates into the equivalent volumetric density profile, $n \propto r^{-1.65}$ (see the derivation of the relation between PDF slopes and (column) density profiles in Federrath & Klessen 2013). Hence the statement in Sect. 2.2 is incorrect, i.e., that the “exponent is smaller than what is typically found for dense cores (-1.5 to -2), suggesting that on large (cloud)-scales, turbulence is the dominating process compared to gravity”. The corrected value $n \propto r^{-1.65}$ is much closer to what is found in related studies (e.g., Arzoumanian et al. 2011) and suggests that gravitational collapse – at least locally – does play an important role in Rosette and likely is the reason for the high-density power-law tail in Fig. 1.

References

- Arzoumanian, D., André, P., Didelon, P., et al. 2011, A&A, 529, L6
 Federrath, C., & Klessen, R. S. 2013, ApJ, 763, 51
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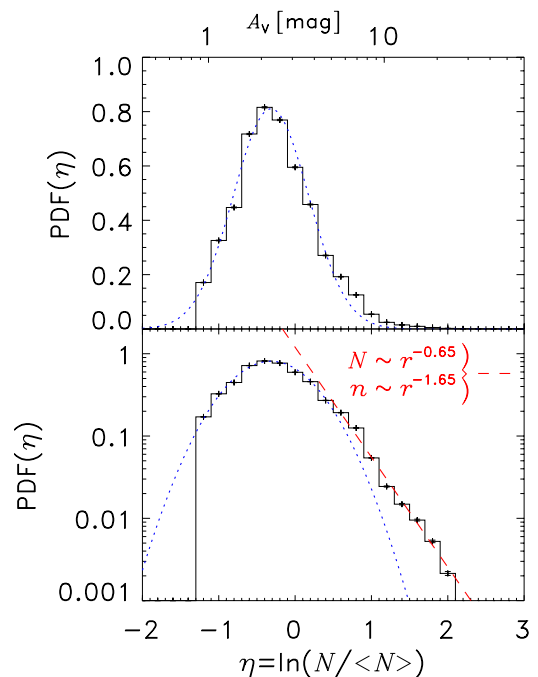


Fig. 1. Corrected version of Fig. 6 in Schneider et al. (2012).